

**2012 Level I Review Exam**  
**Problem Calculation Explanations**

1. A property's tax bill is \$15,000 and the property's market value is \$3,000,000. What is the effective tax rate? You divide the taxes paid by the market value of the property.

Taxes	\$15,000	Divided by	MV	\$3,000,000	<u>Answer</u>	<u>0.50%</u>
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2. A Business has a NOI monthly income of \$1,000. The rate of return is 10%. What is the value of the property?

**This is a direct capitalization problem in which you need to use IRV. You need the annual income for this!!**

**You know the NOI and the Cap Rate. You are looking for value.**

In IRV  $V=I/R$  so

**To get Income you multiply the per month of \$1,000 times 12 to get the yearly NOI.**

V = \$12,000 divided by 10.00% = \$120,000 Answer \$120,000

3. NE  $\frac{1}{4}$ , SE  $\frac{1}{4}$ , NE  $\frac{1}{4}$  of section 5 has how many square feet?

**640 total acres in a section**

<b>160--40--10</b>	<b>10</b>	<b>43560</b>	<b>435600</b>	<b>Answer</b>	<b>\$435,600</b>
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4. Sale #1 sold 1 yr. ago for \$50,000 and 8 months ago for \$53,600

Sale #2 sold 1 yr. ago for \$48,000 and 5 months ago for \$54,048

Sale #3 sold 1 yr. ago for \$52,000 and 9 months ago for \$54,808

What is the time adjustment per month?

	1st Sale	2nd Sale	Difference	Divide by 1st Sale	% Change	# months	% per Month	
Sale # 1	\$50,000	\$53,600	\$3,600	\$3,600/\$50,000	7.20%	4	1.80%	
Sale # 2	\$48,000	\$54,048	\$6,048	\$6,048/\$48,000	12.60%	7	1.80%	
Sale # 3	\$52,000	\$54,808	\$2,808	\$2,808/\$52,000	5.40%	3	1.80%	
<b>Answer</b>								<b>1.80%</b>

5. Basement recreation room has 1,800 sq. ft. It has floor, ceiling and interior wall finish. What is the cost to add for this room?

First go to Book 1 to Chapter 3, and determine the Rec room type, either 1, 2, 3, or 4.

Ours has Floor, Ceiling, and Wall Finish which per the above is a Rec Room Type 2

Now go to Book 1 to Appendix C, and look at the right hand side of the chart.

Then under Rec Room Type 2 for 1,800 Square Feet you should see \$10,900

Answer

\$10,900

6., 7., & 8. Bldg. has 40,000 sq. ft of gross bldg. area and 39,000 sq. ft. of net leasable area. Mkt. rent is \$20 per sq. ft. for net leasable area. Vac. and coll. loss is 4% of PGI. Misc. income is \$4,000. Operating expenses are 35% of EGI, and debt service is projected to be 75% of NOI.

PGI	\$39,000	times	\$20	\$780,000	PGI	<u>Answer # 6</u>	<u>\$780,000</u>
V & C Loss	4%	times	\$780,000	(\$31,200)	V & C		
Misc Income				\$4,000	Misc.In		
EGI				\$752,800	EGI	<u>Answer # 7</u>	<u>\$752,800</u>
Exp	35%	times	\$752,800	(\$263,480)	Exp		
NOI				\$489,320	NOI	<u>Answer # 8</u>	<u>\$489,320</u>

9. A property contains 15,000 sq. ft. Market rent is \$16.00 per sq. ft. The vacancy rate for this type business is 5%, and the collection loss rate is 1%. The property has misc. income of \$500/month. Net leasable area is 14,000 sq. ft. What is the EGI for this property?

PGI	14,000	16	\$224,000			
V & C	0.06		(\$13,440)			
Misc Inc	\$500/mo		\$6,000			
EGI			\$216,560		<u>Answer</u>	<u>\$216,560</u>

10. A residential parcel has 10 acres. There is a dwelling on the property. 7 acres are being farmed. The farm land base rate is \$1,630 and the productivity factor is 1.10. Excess residential acreage is valued at \$1,200 per acre. Homesites are valued at \$6,000. What is the estimated value of this parcel rounded to the nearest \$100?

One acre homesite	1	\$6,000		
Excess acres	2	\$2,400		
Farm land	7	\$12,551		
Total acres	10	\$20,951	Answer	\$21,000

Excess acres	1200	\$1,200	2	\$2,400
Farm land price	1630	1.1	7	\$12,551

11. A two story frame house has 1,500 sq. ft. on each floor. The first floor has 2 increments of brick. The second floor has 1 increment of brick. What value would you have for the second floor?

Go to Schedule A of Appendix C in Book 1

1,500 sq ft for second floor	\$46,500		
add for 1 increment of brick on 2nd floor	\$1,400		
Total second floor	\$47,900	Answer	\$47,900

12. The house in question 11 has a finished basement of 1,000 sq. ft. What value would you put down for the basement?

Go to Schedule A of Appendix C in Book 1 for Unfin Bsmt

Add basement finish	\$23,400		
	\$25,800		
	\$49,200	Answer	\$49,200

13. The house in question 11 has an open framed porch of 550 sq. ft. What value would you put down for the porch?

Go to Schedule A, of Appendix C.

First 400 sq ft of OFP	\$10,900		
We have 550 so -400 leaves 150 rounded is 2 100 ft increments			
2 times \$1,900 for each increment equals	\$3,800		
	\$14,700	Answer	\$14,700

14. Apartment houses in the area have a GIM of 7.0. The EGI of the subject house is \$70,000 and the NOI is \$48,000. What is the estimated value of the subject property?

**Remember GIM is an annual factor based on Effective Gross Income**

**So we have Effective Gross Income of**

**GIM of**

**Estimated value is 7 times the Effective Gross Income or**

**\$70,000**

**\$7**

**\$490,000**

**Answer**

**\$490,000**

15. A house has an attic of 1,400 sq. ft. Of which 900 is finished. What value would you put on the property record card for the attic?

**Attics are in Appendix C, Book 1**

**Figure the same as a finished basement**

**Find the price for the total sq ft of attic as unfinished (1,400 Sq ft)**

**Add the finish to the unfinished (900 sq ft)**

**Total attic price**

**\$7,400**

**\$8,200**

**\$15,600**

**Answer**

**\$15,600**

16. Determine a value for a subject property given the following information:

Subject: Frame Construction--4 rooms on 1st floor  
Hot water heat--4 rooms on 2nd floor--2 car garage  
2 bathrooms on 2nd floor-- Not located on water.

Sale # 2: Frame Construction--4 rooms on 1st floor  
Hot water heat--4 rooms on 2nd floor--2 car garage  
2 bathrooms on 2nd floor-- Not located on water.  
Sold for \$130,000 1 year ago

Sale # 1: Sold for \$150,000--3 days ago--Brick--  
4 1st floor rooms and 4 2nd floor rooms--Hot  
water heat--1 second floor bathroom--3 car  
garage--Located on the water

Sale # 3: Sold 2 years ago for \$100,000--  
Brick Construction--4 rooms on 1st floor  
Forced Air heat--3 rooms on 2nd floor  
1 2nd floor bathroom-- 2 car garage--  
not located on the water

Properties have increased in value 6% per year.

Brick is worth \$15,000 more than frame.

First floor rooms are worth \$10,000

Hot water heat is worth \$2000 more than forced air.

Second floor rooms are worth \$8,000

Bathrooms have a value of \$5,000

Garage bays are worth \$4,000

Waterfront is worth \$10,000 more than non waterfront.

	Sale 1	Sale 2	Sale 3	Subject
Sale Price	\$150,000	\$130,000	\$100,000	
Date of Sale	Current	1 year ago	2 years ago	
Time Adjustment	0	6% or \$7,800	12% or \$12,000	
Time Adjusted Sale Price	\$150,000	\$137,800	\$112,000	
Amenities				
Construction	Brick (\$15,000)	Frame	Brick (\$15,000)	Frame
1st Floor rooms	4	4	4	4
Heat	Hot water	Hot water	Forced air +\$2,000	Hot water
2nd floor rooms	4	4	3 +\$8,000	4
2nd floor bathrooms	1 +\$5,000	2	1 +\$5,000	2
Garage	3 car (\$4,000)	2 car	2 car	2 car
Location	Waterfront (\$10,000)	Not waterfront	Not waterfront	Not waterfront
Net Adjustment	(\$24,000)	0	0	
Adjusted sale price	\$126,000	\$137,800	\$112,000	\$137,800

17, 18, 19, and 20. Find the Median, Mode, COD, and PRD of the following.

You are provided with the following information:

Develop the Median, Mode, Mean, Weighted Mean, COD, and PRD

#1	Sale Price	Assessed Value	Sales Ratio	Median	ABS DEV
#2	\$49,800	\$45,800	0.920	0.974	0.054
#3	\$52,400	\$48,200	0.920	0.974	0.054
#4	\$40,000	\$42,200	1.055	0.974	0.081
#5	\$55,000	\$50,800	0.924	0.974	0.050
#6	\$51,450	\$55,300	1.075	0.974	0.101
#7	\$110,100	\$107,200	0.974	0.974	0.000
#8	\$90,700	\$87,500	0.965	0.974	0.009
#9	\$86,100	\$86,000	0.999	0.974	0.025
#10	\$96,700	\$96,700	1.000	0.974	0.026
	\$632,250	\$619,700			0.045

Median	<b>0.974</b>
Mode	<b>0.920</b>
Mean	<b>0.981</b>
Weighted Mean	<b>0.980</b>
COD	<b>4.574</b>
PRD	<b>1.001</b>

17. Median

a) .920

**b) .974**

c) 1.001

d) .981

18. Mode

**a) .920**

b) .974

c) 1.001

d) .981

19. COD

- a) 9.81
- b) .974
- c) 1.001
- d) 4.574

20. PRD

- a) .920
- b) .974
- c) 1.001
- d) .981

21. In the sales comparison approach, attribute adjustments such as building size, # of bathrooms, year built are examples of \_\_\_\_\_.

- a. qualitative adjustments
- b. paired sales
- c. quantitative adjustments
- d. a buyers market

22. A corner doughnut shop has monthly income earned of \$1,250. The owner's required rate of return for this type of property is 11% per year. What is the value of this property?

- a. \$138,181
- b. \$11,364
- c. \$1,650
- d. \$136,364

23. If an 18-unit apartment building has 4 vacant units, what is the occupancy rate?

- a. 78%
- b. 22%
- c. 19%
- d. 25%

24. The sale price of a property divided by the annual effective gross income it generates is the \_\_\_\_\_.

- a. gross income multiplier
- b. neighborhood factor
- c. gross rent multiplier
- d. indicated value

25. The \_\_\_\_\_ rate reflects the return on the investment.

- a. recapture
- b. capitalization
- c. effective tax
- d. discount

26. A house has an attic of 2,500 square feet. Of this, 1,280 square feet are finished. What value would you show on the property record card for the attic?

- a. 9,200
- b. 21,300
- c. 9,400
- d. 25,600

27. As taught in this Level I prep class, the first adjustment in the Sales Comparison Approach is for \_\_\_\_\_.

- a. bedrooms
- b. sale prices
- c. garages
- d. time

28. I am pricing a two-story dwelling that has air conditioning throughout. The dwelling has 1,900 square feet on the first floor and 1,300 square feet on the second floor. What is the air conditioning adjustment amount?

- a. 5,400
- b. 4,200
- c. 4,100
- d. 2,900

29. If my subject property has 5 bedrooms and my comparable has 4 bedrooms, when making the adjustment to the comparable this adjustment would be made \_\_\_\_\_.

- a. downward
- b. upward
- c. no adjustment required
- d. as a paired sales adjustment